

**U.S. ENVIRONMENTAL PROTECTION AGENCY  
AREA COMMAND EXECUTIVE SUMMARY / SITUATION REPORT  
2015 Gold King Mine Release**



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Area Command (EPA Regions 8, 6, and 9)**



EPA Region 08 Mobile Emergency Operations Center (MEOC) staged at the Gold King Mine site.

**Subject:** EXECSUM / SITREP #8  
Gold King Mine Release

San Juan County, Colorado  
Latitude: 37.8945 Longitude: -107.6384

**From:** Area Command Situation Unit  
**Date:** 08/19/2015  
**Reporting Period:** 08/18/2015 0700 through 08/19/2015 0700  
**Website:** [www.epa.gov/goldkingmine](http://www.epa.gov/goldkingmine)

## **Executive Summary**

For Internal Use Only  
Gold King Mine Release  
EPA Executive Summary: August 19, 2015 1900

### **Situation Summary**

EPA Area Command (AC), comprised of EPA Regions 6, 8, and 9 is continuing strategic management over all Unified Incident Command Posts (ICPs) involved with the response.

### **Highlights, Key Updates/Changes**

- AC provided logistics and support for site visits by officials from the States of Colorado and Utah. AC is currently providing logistics and support for the upcoming site visit and public meeting by two staff members of Senator Barrasso's office.
- AC continued to provide disaster assistance to local residents regarding claims processing related to the response.
- AC Logistics filled the Documentation Unit Leader position. The Documentation Unit Leader will be on-site starting Monday, August 24, 2015.
- AC continued to monitor the stoppage of field activities within the Shiprock Chapter of the Navajo Nation in EPA Region 9.

### **Area Command Emphasis**

For the next operational period, the AC command emphasis will be:

- Positive and professional communications with Stakeholders and Response Personnel.
- Well-being of response personnel.
- Response documentation and right-sizing guidance.
- Safety risk management and mitigation practices.

Note: The metrics provided in this SITREP represent quantities reported for work completed on August 17 and August 18, 2015.

## 1.0 Operations

### 1.1 Sampling Operations

The table below summarizes Operations sampling activities for August 17, 2015.

**Table 1- Operations Sampling Summary**

<b>Matrix</b>	<b>Region</b>	<b>August 17, 2015</b>	<b>Cumulative for Response*</b>
Private Drinking Water Well Samples	Region 8	26	230
	Region 6	0	170
	Region 9	0	0
Surface Water Samples	Region 8	7	144
	Region 6	9	102
	Region 9	0	106
Sediment Samples	Region 8	0	39
	Region 6	9	127
	Region 9	0	81

\*Note: Sample totals compiled daily from SCRIBE database. Totals include field samples and QA/QC samples.

### 1.2 Water Distribution and Transportation Branch

Area Command continues to monitor potable water, agricultural water and agricultural food deliveries. EPA has purchased 1,120 cases of bottled water to hand out to the community. The table below provides a summary of public support activities completed as of August 18, 2015.

**Table 2- Public Support Summary**

Activity	Region	August 18, 2015		Cumulative	
		Deliveries	Quantity*	Deliveries	Quantity*
Potable Water Deliveries	Region 8	2	41,400	18	221,400
	Region 6	0	0	0	0
	Region 9	0**	0**	0**	0**
Livestock / Agricultural Water Deliveries	Region 8	0	0	47	141,980
	Region 6	0	0	59	1,104,990
	Region 9	13	208,000	53	834,000
Agricultural Food Deliveries	Region 8	0	0	0	0
	Region 6	0	0	1	244
	Region 9	0	0	1	384

Notes \* Water quantities are reported in gallons, food quantities are reported in bales of hay.  
 \*\*Water deliveries in Region 9 are being handled by the Navajo Tribal Utility Authority.

### 1.3 Community Engagements

The table below provides a summary of Community engagements reported for August 18, 2015.

**Table 3- Community Engagement Summary**

August 18, 2015		
Community Engagements	Region 8	1
	Region 6	0
	Region 9	1

### 1.4 Anticipated VIP / Congressional Visits and Public Events

The table below summarizes upcoming anticipated Site visits and public events.

**Table 4- Anticipated Site Visits and Public Events Summary**

<b>Unit</b>	<b>Planned Event</b>	<b>Anticipated Date</b>
Area Command	Mine site visit by two staff members of Senator Barrasso's office.	8-20-2015
	Informational meeting hosted by members of Senator Barasso's office, along with EPA and local agencies.	8-21-2015
Region 8	Public Claims Assistance Session- Durango IC	8-19-2015
	Public Meeting- Durango, CO	8-20-2015
Region 6		
	None Reported.	N/A
Region 9	Daily meetings at designated Navajo Chapters	Daily
	Meeting with Monument Valley Chapter	8-20-2015
	Meeting with Navajo Mountain Chapter	8-21-2015

### **1.5 Community Relations Branch**

EPA National Call Number (844-607-9700)- On August 18, 2015, the EPA National call number received **9** calls. As of August 17<sup>th</sup>, 2015, the national call number has received a total of **167** calls.

EPA Region 8- On August 18, 2015, their regional call center (970-385-8700) received **22** calls. Their regional call center has received a total of **751** calls. On August 18, 2015, the toll-free call in number received **5** inquiries related to Region 8. To date, EPA Region 8 has received **88** calls on the toll-free call in number.

EPA Region 6- On August 18, 2015 the toll-free call-in number received **2** inquiries related to Region 6. To date, EPA Region 6 has received **57** calls.

EPA Region 9- On August 18, 2015, the toll-free call in number received **2** inquiries related to Region 9. To date, EPA Region 9 has received **23** calls.

### **2.0 Drinking Water System Impacts**

As of Saturday, August 15, 2015, all water systems previously impacted by the spill were back in operation. The table below summarizes drinking water systems affected by the response and their status as of August 18, 2015.

**Table 5- Summary of Affected Water Systems**

Region	Number of Affected Water Systems	Population	Status
Region 8	0	0	All systems currently in operation.
Region 6	0	0	All systems currently in operation.
Region 9	0	0	All systems currently in operation.

### 3.0 Finance

#### 3.1 Estimated Response Costs to Date

The table below summarizes estimated total costs for the response as of August 19, 2015.

**Table 6- Estimated Response Costs Reported as of August 19, 2015**

REGION	EPA CUMULATIVE EXPENDED PAYROLL	EPA CUMULATIVE EXPENDED TRAVEL	EPA CUMULATIVE OTHER CHARGES	EPA CUMULATIVE CONTRACT COST	TOTAL CUMULATIVE COSTS
EPA REGION 8	\$651,367	\$68,473	\$0	\$819,687	\$1,539,527
EPA REGION 6	\$271,170	\$35,050	\$68,855	\$1,240,650	\$1,615,725
EPA REGION 9	\$228,800	\$24,750	\$0	\$282,700	\$536,250
<b>TOTAL</b>	<b>\$1,151,337</b>	<b>\$128,273</b>	<b>\$68,855</b>	<b>\$2,343,037</b>	<b>\$3,691,501</b>

#### 3.2 Estimated Burn Rates

The table below summarizes estimated burn rates as of August 19, 2015.

**Table 7- Estimated Burn Rates as of August 19, 2015**

REGION			ESTIMATED BURN	DAILY RATE
EPA	REGION	8		\$128,294
EPA	REGION	6		\$134,644
EPA	REGION	9		\$44,688
TOTAL DAILY BURN				\$307,625

#### **4.0 Participating Entities**

Federal, regional, local and other entities participating in the response are summarized below.

##### **Region 8**

US EPA  
 USFWS  
 US Coast Guard  
 US Bureau of Reclamation  
 Agency for Toxic Substances and Disease Registry (ATSDR)  
 ERT  
 Colorado Office of Emergency Management  
 Southern Ute Indian Tribe (SUIT)  
 Ute Mountain Ute Tribe  
 La Plata County  
 San Juan County  
 Colorado Department of Public Health and Environment (CDPHE)  
 Southwest IMT  
 City of Durango  
 Durango Fire Department  
 San Juan County Health Department

##### **Region 6**

US EPA  
 USFWS  
 NMED  
 ATSDR

NM Department of Health  
 NM Office of the State Engineer  
 NM Department of Game and Fish  
 County of San Juan ☐ New Mexico

### **Region 9**

US EPA  
 US Coast Guard  
 Navajo Nation  
 State of Colorado  
 State of New Mexico  
 State of Utah  
 State of Arizona

## **5.0 Personnel On-Site**

The table below summarizes staffing numbers for the federal entities and agencies active in the response.

**Table 8- Personnel On-Site as of August 18, 2015**

<b>Region</b>	<b>Agency / Entity</b>	<b>Number of Personnel</b>
Area Command	U.S. EPA	15
	US. EPA Contractors	3
	U.S. Coast Guard	3
EPA Region 8	U.S. EPA Region 8	42
	US. EPA Region 8 Contractors	35
	U.S. Coast Guard	3
	Other Federal, State, Local, and Tribal Entities	68
EPA Region 6	U.S. EPA Region 6	33
	US. EPA Region 6 Contractors	32
	U.S. Coast Guard	0
	Other Federal, State, Local, and Tribal Entities	0
EPA Region 9	U.S. EPA Region 9	10
	US. EPA Region 9 Contractors	18
	U.S. Coast Guard	8
	Other Federal, State, Local, and Tribal Entities	2
	<b>Total</b>	<b>272</b>

## **6.0 Source of Additional Information**

For additional information, refer to [www.epa.gov/goldkingmine](http://www.epa.gov/goldkingmine)

**ATTACHMENT 1**  
**PRESS RELEASES**

## **EPA Announces U.S. Department of the Interior to Lead Independent Review of Gold King Mine Release**

*Review to include analysis of the cause of release, contractor activities and lessons learned for use on ongoing and planned projects.*

WASHINGTON, DC, August 18, 2015 - EPA announced today the U.S. Department of the Interior (DOI) will lead an independent assessment of the factors that led to the Gold King Mine incident on August 5, 2015, in Colorado that affected the Animas and San Juan rivers. The assessment begins today, Tuesday, August 18, and it is anticipated that DOI will provide the assessment report to EPA and the public within 60 days.

The goal of DOI's independent review is to provide EPA with an analysis of the incident that took place at Gold King Mine, including the contributing causes.

Details about the independent review will be made available by DOI when they become available.

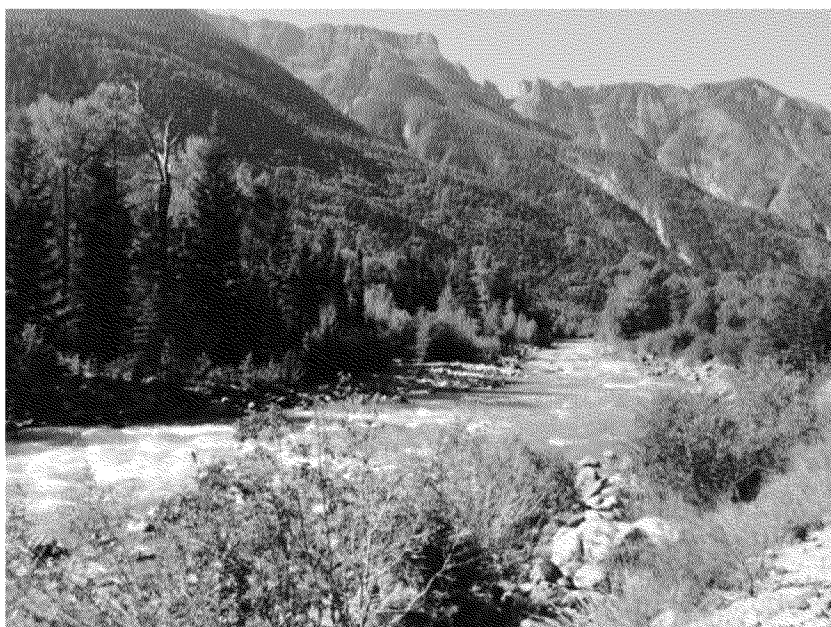
In addition to the independent review, EPA is conducting its own internal technical examination of the incident. Both reviews will help inform ongoing and planned site assessments, investigations, and construction or removal projects.

**ATTACHMENT 2**  
**REGIONAL SITUATION REPORTS**

**U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
2015 Gold King Mine Release SITREP**



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 8**



**Subject:** Situation Report #11  
Gold King Mine Release  
San Juan County, CO  
Latitude: 37.8945 Longitude: -107.6384

**From:** Colorado Unified Command (Situation Unit)

**Date:** 08/19/2015

**Reporting Period:** 08/18/2015 through 08/18/2015

**Website:** <http://www2.epa.gov/goldkingmine>

**New information included in the SITREP is in bold text. The format of the SITREP has been updated with this issue to include Operation Sections for the Durango Area and Mine Site activities.**

### **Executive Summary**

On August 5, while investigating the Gold King Mine in Colorado, the EPA cleanup team triggered a release of mine wastewater into Cement Creek which feeds into the Animas River. The release resulted in coloring the Animas River a mustard-orange as the pulse of the release moved downstream. The leading edge of the release passed through Durango, Colorado, on Friday, August 7, 2015, and on August 8, 2015, it crossed the border into New Mexico where it eventually discharged into the San Juan River. As the leading edge of the release moved further down the Animas River into the San Juan River it became indistinguishable.

A Unified Command (UC) located in Durango, Colorado was established and continues to assess and mitigate contamination resulting from the release. The UC includes EPA Region 8, State of Colorado Office of Emergency Management (OEM), Southern Ute Indian Tribe, and La Plata County. San Juan Basin Health Department has transitioned out of the UC and is now providing an Agency Administrator to the UC. Currently San Juan County and the Ute Mountain Ute Tribe are providing Administrators to the UC. The City of Durango and the Colorado Department of Public Health and the Environment (CDPHE) are providing Agency Representatives to the UC.

The EPA and CDPHE have been taking daily surface water samples from the Animas River and Cement Creek. Animas River sediment sampling has occurred. CDPHE has sampled raw and finished public drinking water supply systems. Upon request, the EPA has also been sampling private drinking water wells. The results of the sampling analysis are being distributed as appropriate. The EPA has also completed irrigation ditch assessment and ditches were flushed and monitored prior to opening for irrigation use.

The Animas River reopened to recreational use mid-day Friday August 14, 2015 after being closed to all watercraft since August 6, 2015. The City of Durango's drinking water intake was not in use at the time of the event and remained off line until Friday, August 14, 2015. Currently all irrigation ditches are open and available for irrigation use.

An EPA Area Command (AC) is also located in Durango, Colorado and coordinates EPA's response between the EPA Regions 6, 8, and 9.

La Plata and San Juan counties still have active disaster declarations and the public health advisory issued 8/14/2015 by CDPHE for the Animas River remains active.

A Joint Information Center (JIC) and an EPA AC public information officer (PIO) are co-located and coordinating support for the UC and the EPA AC respectively.

## 1. Introduction

### 1.1 Background

Site Number: A8K9RV

Contract Number:

D.O. Number:

Action Memo Date:

Response Authority: CERCLA

Response Type: Emergency

Response Lead: EPA

Incident Category:

NPL Status: not listed

Operable Unit:

Mobilization Date: 08/05/2015

Start Date: 08/05/15

Demob Date: TBD

Completion Date:

CERCLIS ID:

RCRIS ID:

ERNS No.:

State Notification: 08/05/15

#### 1.1.1.1 Incident Category

#### 1.1.2 Site Description

The Gold King Mine near Silverton, Colorado is a historic gold mine at approximately 11,300' elevation. The mine has a continuous discharge of acidic mine drainage that is a significant contributor of manganese, zinc, copper, and cadmium into the Cement Creek drainage of the Animas River watershed. The Gold King Mine has not had maintenance of the mine workings since 1991, and the workings have been inaccessible since 1995 when the mine portal collapsed.

The EPA Region 8 has been investigating the conditions to assess the on-going releases and incremental de-watering and removal of blockages to prevent blowouts.

##### 1.1.2.1 Location

San Juan County, Colorado; La Plata County, Colorado; Southern Ute Indian Tribe; and Ute Mountain Ute Tribe.

##### 1.1.2.2 Description of Threat

Mine waste water was released into Cement Creek and the Animas River. The volume of the release based on US Geological Survey (USGS) Cement Creek gauging station was estimated at three million gallons. The initial environmental concern was the pulse of contaminated water containing sediment and metals discharged in Cement Creek which flows into the Animas River through Durango, Colorado, and into New Mexico where it joins the San Juan River before flowing into Utah.

##### 1.1.3 Site Inspection Results

The Executive Summary section provides a description of the various sampling efforts that have occurred.

## **1.2 Incident Objectives**

1. Ensure health and safety of the public and response management personnel.

### **Sampling operations:**

2. Continue sampling plan and develop strategy to identify and evaluate any potential risks due to sediment in the river.
3. Continue river assessment through surface water sampling.
4. Roll current well sampling effort into interim shallow groundwater monitoring plan currently under development. Communicate private well results and other follow up action within 120 hours of sampling.
5. Develop a demobilization plan for next operational period, including identifying triggers and turn back standards.
6. Implement medium term river monitoring plan with contractor per their scope of work.

### **Mine:**

7. Continue management of adit discharge.
8. Maintain stability of mine road to ensure access.
9. Prepare for mine dump stabilization.

### **Outreach/Community:**

10. Effectively communicate with public and stakeholders, including San Juan County, Colorado, utilizing a multi-faceted communication strategy to disseminate results.
11. Develop a means to assess the economic impact upon affected communities.
12. Continued coordination with the Department of Agriculture (including state and local veterinarians) and the Colorado Extension.
13. Develop short term notification system for any immediate needs and develop a plan for implementing a workgroup to develop a long term notification plan.
14. Provide water of appropriate quality for specified use.
15. Daily brief of accomplishments and upcoming activities for La Plata and San Juan County policy group by 0800.
16. Develop communications message on to include:
  - a. Mine discharge management plan for next 30-60 days.
  - b. Plan to develop long term mitigation.
  - c. Long term monitoring and sampling plan for river length.

## **1.3 Critical Resource Needs**

All resources are being tracked by the Resources Unit. Resources for the response continue to be ordered as needed to fill critical resource needs.

## **1.4 Strategic Considerations**

United group of subject matter experts to advise policy makers.

## 2. Current Activities

### 2.1 Operations Section

#### 2.1.1 Response Actions to Date

##### 2.1.1.1 Durango Area Response Actions

#### Property Assessments

The EPA is continuing property assessments, as needed, and identifying mitigation needs. There are currently 4-8 properties under construction for targeted limited sediment removal.

#### Surface and Private Well Water Sampling and Sediment Sampling

The EPA collected surface water and sediment samples to assess the upper Animas River through the canyon. In addition, the EPA sampled at five surface water locations as follows:

Cement Creek – 1

Animas River upstream of confluence with Cement Creek – 1

Animas River downstream of confluence with Cement Creek – 1

Animas River through Durango – 2 (Baker's Bridge and River Road)

The EPA samples collected on 8/18/2015 are provided in the following table:

Matrix	Number of Samples
Potable Water	22*
Sediment	1
Surface Water	5

Quality Assurance samples are included in these numbers.

The EPA is conducting private well water sampling as needed and calling those residents sampled to provide the analytical results. Samples are taken from the well head and not the tap. It is unclear if the exceedances reported in the table below were caused by the mine release. Follow up work at the wells that exceed drinking water standards include: flushing the well; resampling at the well; and taking an additional tap water sample for analysis.

The following table provides the private well information up to 8/18/2015. No analytical results were received on 8/18/15 due to a weekend sample shipping lag.

Quantity	Daily	Totals
Private well samples requested*	0	322
Private wells sampled (does not include QA samples)	20	253
Private wells with primary drinking water exceedances**	0	7
Private wells with secondary drinking water exceedances**	0	11
Remaining private wells to be sampled*		69

\* The well requests and remaining lists are constantly refined as both duplicate requesters and requestors determined to be on city water are removed from the list.

\*\*These samples are taken at the well head and not the tap.

## Call Center

Call center totals are provided in the following table:

Topic	8/18/2015	To Date Total
Well Water Test Scheduling	10	355
Water Concerns	4	105
Health Concerns	0	31
Recreation	0	21
Ecological Concerns	2	19
Livestock/Irrigation	2	19
Tourism/Media	3	56
Volunteer Offers	2	24
General Concerns	2	121
<b>Daily Totals:</b>	22	751

**Total calls received at the Call Center through 8/87/2015 is 751.** An inaccuracy was found when reviewing the numbers reported yesterday. This report covers several days and corrects the inaccuracy.

## Water Distribution

- **There were no deliveries of non-potable water on 8/18/2015 and there is no longer a need for non-potable water deliveries.**
- **On 8/18/15 potable water deliveries were made to two locations for a total of 41,400 gallons.**
- Other operations- The EPA continues to pump and filtrate river water to fill fish ponds at one location.
- 1120 cases of bottled water have been purchased to hand out to community. Bottled water is available at the UC/AC facility for pickup by community members.

## CDPHE Sampling

Public water systems will continue sampling according to their regular sample plans established by CDPHE. **The CDPHE joined the EPA to assess the upper Animas River through the canyon. An area of slow water and significant sediment deposits was identified approximately five miles below Silverton. The area is commonly known as Elk Park.**

### 2.1.1.2 Mine Division Response Actions

The EPA continues to operate and work on optimizing four treatment and sedimentation ponds at the mine site which are treating water by lowering acidity levels and removing dissolved metals.

## Water Treatment Plant

- **Performed a test of adding lime to first treatment pond; lime was shown to increase settling.**

- A filter medium was installed at the effluent of first treatment pond prior to pond 2.
- Twenty-four hour water treatment operations began.
- Water quality samples continue to be collected at 11 locations three times daily.
- Three split water samples were collected with CDPHE and submitted for analysis:
  - Upstream on Cement Creek prior to confluence of treatment ponds;
  - Downstream of treatment confluence with Cement Creek; and
  - Downstream of Gladstone on Cement Creek.

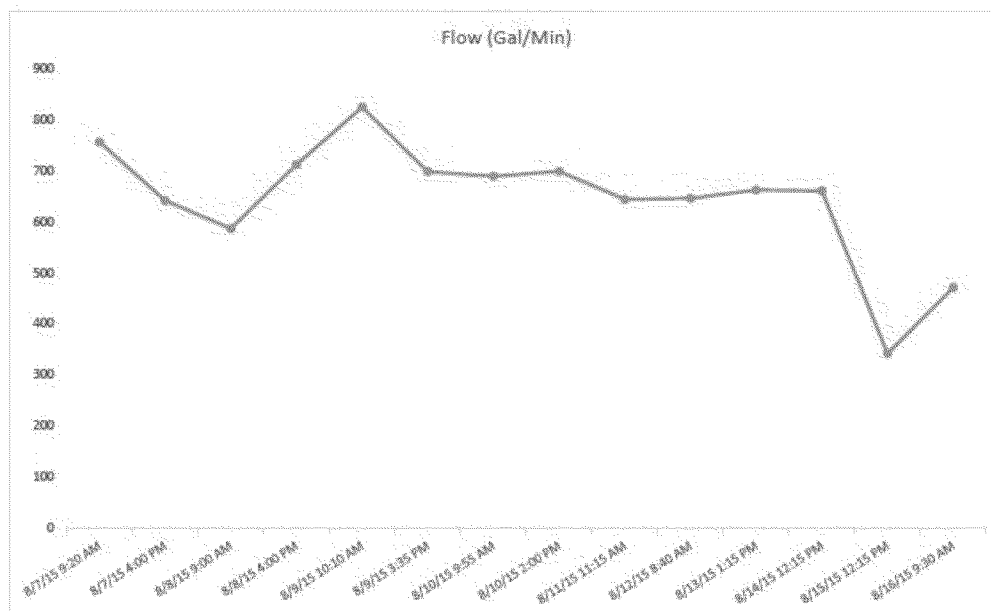
#### Gold King Mine

- The EPA independent investigative team was on scene.
- CO Division of Reclamation Mining and Safety (DRMS) was on site.
- Mine stability consultants were on site.
- A dedicated Safety person was requested in order to support on site operations.

Flow from the mine through the morning of 8/16/2015 is shown in the following chart. **On 8/18/2015, the flow rate from the Gold King Mine adit portal was recorded at:**

- 606 gpm at 0900 hour, and
- 515 gpm at 1620 hour.

Treated water from the last treatment pond is discharging into Cement Creek. The graph will be updated in the next SITREP.



## 2.1.2 Anticipated Activities

### 2.1.2.1 Durango Area Anticipated Activities

The CDPHE plans to demobilize on 8/19/2015 and will return to the normally scheduled watershed sampling in the area.

**The EPA will return to sampling seven surface water locations as of 8/19/2015.**

**A public meeting will be held at 1830 at Miller Middle School on Thursday, 8/20/2015.**

#### **2.1.2.2 Mine Division Anticipated Activities**

**The treatment in the first pond will be changed from direct treatment to circular treatment to improve circulation.**

**Other activities occurring in the area that are not directly associated with the response are:**

- **Bureau of Land Management (BLM) is conducting survey of roads near the mine site.**
- **The EPA is waiting permission from the State Historic Preservation Officer (SHPO) permission to remove debris in path of pond transfer pipe.**
- **San Miguel Power will remove damaged power lines on 8/26/2015 and permission was given to remove poles at Gold King Mine portal.**

## **2.2 Logistics Section**

No report.

## **2.3 Finance Section**

No report.

## **2.4 Other Command Staff**

### **2.4.1 Safety Officer**

**As operations continue, please remember the emergency response peer support team has offered EPA staff. You can talk to the team on a private basis, either in person or over the phone, when you feel stressed. The peer supporters are OSCs or other EPA field staff who understand your job and can offer a listening ear when you need to vent about extended time away from home, a difficult response, or one of the many other things that can make emergency responses challenging.**

**You can contact your Critical Incident Stress Management (CISM) team members at any time (24/7):**

**Wendy Adams (R-10): 425 466-6532**

**Tony Honnellio (R-1): 617 947-4414**

### **2.4.2 Liaison Officer**

No report.

### **2.4.3 Information Officer**

There are two PIOs in Silverton to support the community information needs and the San Juan County Emergency Manager.

Social Media Sites being maintained by the UC JIC:

Blog – [goldkingminerelease.blogspot.com](http://goldkingminerelease.blogspot.com)

FB – [facebook.com/goldkingminerelease](https://facebook.com/goldkingminerelease)

Twitter - @GKMRelease, @SilvertonCO1, @VisitSilverton

YouTube Channel – Gold King Mine Release

**As of 0930 on 8-19-2015, the blog has received 1015 page views and 0 comments; Facebook has 32 likes, 2 new shares and 0 comments; and there have been 17 tweets and there are 21 followers on twitter.**

#### **2.4.4 Weather Forecast**

**Weather forecast for August 19 and 20, 2015:**

##### **DURANGO AREA**

###### **Today**

Sunny, with a high near 86. North wind 5 to 10 mph becoming west in the morning. Winds could gust as high as 20 mph.

###### **Tonight**

Clear, with a low around 45. West northwest wind 5 to 15 mph becoming north northeast after midnight.

###### **Thursday**

Sunny, with a high near 84. Light and variable wind becoming west 10 to 15 mph in the afternoon.

###### **Thursday Night**

Partly cloudy, with a low around 52. West wind 5 to 15 mph becoming east after midnight.

##### **SILVERTON AREA**

###### **Today**

Sunny, with a high near 70. East wind around 10 mph becoming west northwest in the afternoon.

###### **Tonight**

Mostly clear, with a low around 39. West northwest wind 5 to 10 mph becoming east southeast after midnight.

###### **Thursday**

Sunny, with a high near 69. West northwest wind 5 to 15 mph.

###### **Thursday Night**

Partly cloudy, with a low around 40. West northwest wind 5 to 15 mph becoming south southwest after midnight.

### 3. Participating Entities

#### 3.1 EPA Area Command

The AC includes EPA Regions 6, 8 and 9. The EPA Region 8 includes Colorado. The EPA Region 6 is working closely with the New Mexico Environment Department (NMED) and the EPA Region 9 is working with the Navajo Nation. The AC is completing daily Executive Summary updates on AC operational activities.

#### 3.2 Unified Command and Cooperating Agencies

A Unified Command (UC) located in Durango, Colorado was established and continues to assess and mitigate contamination resulting from the release. The UC includes EPA Region 8, State of Colorado Office of Emergency Management (OEM), Southern Ute Indian Tribe, and La Plata County. San Juan Basin Health Department has transitioned out of the UC and is now providing an Agency Administrator to the UC. Currently San Juan County and the Ute Mountain Ute Tribe are providing Administrators to the UC. The City of Durango and the Colorado Department of Public Health and the Environment (CDPHE) are providing Agency Representatives to the UC.

The SUIT continues water delivery. In addition to participating in the UC, the SUIT has been conducting SUIT IMT briefings, public messages and briefings, sampling and analyzing water. As a proactive measure, the SUIT is continuing installing reverse osmosis on tribal residential kitchen taps. If individual drinking well sampling results show any concerns, additional actions will be taken.

On 8/18/2015 the Safety & Cultural Liaison arrived at the UC. A Tribal Liaison from the Indian Health Service will be visiting the tribe the same day. On 8/20/2015 Senator Barasso will be visiting the tribe and the next day there will be an update on the response for the Tribal Elders.

US Bureau of Reclamation (USBR) Technical Service Center is providing technical assistance for the EPA road stabilization efforts in and around the mine site.

A Disaster Assistance Center (DAC) was requested by La Plata County. The request was implemented by the Colorado Department of Local Affairs (DOLA) and will be open in the La Plata County Fairgrounds exhibit hall on Tuesday and Wednesday (August 18 and 19) from 1000 to 1600 hours. The EPA will be accepting claims at this event and CDPHE will also be present. The DAC provides technical assistance and support to the community and impacted residents including providing information on low cost loans.

### 4. Total Personnel On Incident

Gold King Mine Release 2015	
	08/18/2015
Group	Number
EPA @ REOC	11 (12 on call)
Contractors @ REOC	1
EPA in Field)	18
EPA Contractors in Field	33

EPA Laboratory	0
Contractors Laboratory	1
USCG	3
ERT	2
<b>Subtotal EPA Region 8 Resources</b>	<b>69 (+12 on call)</b>

On 8/18/2015 the approximate number of people working under the UC was 120.

Organizations with individuals deployed to the response under the UC include:

- Colorado OEM
- Southern Ute Tribe
- La Plata County
- San Juan County
- CDPHE
- Southwest IMT
- Northwest IMT
- Boulder IMT
- Jeffco IMT
- City of Durango
- San Juan Basin Health Dept.
- US Bureau of Reclamation
- US Bureau of Indian Affairs
- Grand Junction Fire

Personnel working at the Colorado Unified Command Post on 08/18/15

(Does not include Area Command Personnel):

<b>Position / Section</b>	<b>Number of Personnel</b>
Unified Command	5*
PIO	12
Safety	2
Operations	4
Planning (incl SITL, ENVL & RESL)	4
Logistics	1
Finance	2
Liaisons	2
Agency Representatives/Administrators	1
<b>Total</b>	<b>33</b>

\*One UC is located at the Gold King Mine site.

#### 5. Definition of Terms –

AC - Area Command (Comprised of EPA Regions 6, 8 and 9)

ATSDR- Agency for Toxic Substances and Disease Registry

BIA - Bureau of Indian Affairs

**BLM – Bureau of Land Management**

BOR - Bureau of Reclamation

CDPHE - Colorado Department of Public Health and Environment

CERCLA - Comprehensive Environmental Responsibility, Compensation and Liability Act

**CISM - Critical Incident Stress Management**

COEM - Colorado Office of Emergency Management

DAC- Disaster Assistance Center

**DRSEM – Division of Homeland Security and Emergency Management**

DOLA- Department of Local Affairs

**DRMS - CO Division of Reclamation Mining and Safety**

EPA - United States Environmental Protection Agency

ERT - EPA Emergency Response Team

**EOC – Emergency Operations Center**

**gpm – gallons per minute**

**IC – Incident Command**

MCL-Maximum Contaminant Levels

MSDS - Material Safety Data Sheet

NMED - New Mexico Environment Department

**OEM – Office of Emergency Management**

**PIO- Public Information Officer**

PPE - Personal Protective Equipment

REOC - EPA Regional Emergency Operations Center

**SEOC – State Emergency Operations Center**

**SHPO - State Historic Preservation Officer**

SWIMT - South West Incident Management Team

UC - Unified Command (Comprised of Southern Ute Indian Tribe, La Plata County, EPA Region, State of Colorado OEM)

UCP - Unified Command Post

USCG - United States Coast Guard

UTV- Utility Terrain Vehicle

**U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Gold King Mine Spill - Region 6**



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region VI**

**Subject: POLREP #12  
Gold King Mine Spill - Region 6**

**Various New Mexico locations, NM  
Latitude: 36.8374600 Longitude: -107.9916800**

**From: Ronnie Crossland, Region 6 Regional Incident Commander (RIC)**

**Date: 8/19/2015**

**Reporting Period: 8/18/2015 0700 – 8/18/2015 1900**

## **1. Introduction**

### **1.1 Description of Threat**

Region 8 reported approximately three million gallons of mine waste water was released into Cement Creek and the Animas River. The primary environmental concern is the pulse of contaminated water containing sediment and metals flowing as an orange-colored discharge downstream through Durango, Colorado, and into New Mexico and Utah.

## 1.2 Preliminary Removal Assessment/Removal Site Inspection Results

Water monitoring and sampling is ongoing at public water supply intakes and private wells and field pH levels and other water quality parameters are being monitored.

## 2. Current Activities

Headquarters has established a joint website at [www.epa.gov/goldkingmine](http://www.epa.gov/goldkingmine).

Created a new general public call-in number for Regions 6, 8, and 9: (844) 607-9700.

### 2.1 Operations Section

EPA had a follow up discussion with NMED on both short and long term criteria as proposed in their submission. EPA requested that NMED provide clarification on some elements of their recommendations. EPA will continue collaboration with NMED.

#### Data Posting to the Web

The Irrigation Ditch Sediment sample data from August 13, 2015 is now available on the Gold King Mine website: <http://www2.epa.gov/goldkingmine/>.

#### Community Meeting/VIP

No Community Meetings or VIP visits are scheduled.

#### Toll-Free Number Activity

	8/18/15	Total to Date
Total Calls Received	9	154
Calls Concerning R6	2	57
Calls Returned by R6	7	57

The table below is a breakdown of the calls pertaining to Region 6. Of the seventeen Well Water Test Scheduling calls, seven of the citizens expressed gratitude for EPA's efforts in sampling.

TOPIC	DATE: 08/18/2015	OVERALL TOTALS
Well Water Test Scheduling	1	18
Water Concerns	0	7
Health Concerns	0	4
Livestock/Irrigation	0	4
Tourism/Media	0	1
Volunteer Offers	0	3
General Concerns	0	14
Contractor/Vendor Support	1	6
<b>Daily Totals:</b>	<b>2</b>	<b>57</b>

### Private Drinking Water Well Sampling

EPA will the private well sampling effort on August 19, 2015. Fifteen teams consisting of NMED, EPA, and EPA Contractors are sampling in order to have additional data while the August 10-16, 2015 sampling data is being validated.

EPA is currently drafting a joint state/EPA letter to notify the private well owners about their test results from the State's water fair initiative and EPA's private well sampling when those results are available for reporting.

Date	Number of Private Wells Sampled
8/10	10
8/11	31
8/12	23
8/13	0 New Locations (38 re-samples)
8/14	35
8/15	15
<b>TOTAL</b>	<b>114 Distinct Wells</b>

### Drinking Water Technical Support/Pretreatment/Connections

Morningstar is operating on slow flow capacity due to the turbidity generated in the setline ponds when the water tankers first filled the ponds. As of the evening of August 18, 2015, the ponds were clearing out, in addition, the operators are having to backwash more than normal to keep sediment out of the filters. EPA is coordinating with NMED and the water system about taking special samples or resuming their normal compliance sampling for coliforms in the distribution system to check on the quality of the treated water.

**AUGUST 19, 2015 UPDATE TO SITREP** - EPA continues to provide on-site assistance to Morningstar, August 19, 2015. When the water was being pumped from Farmington to the Morningstar tank the evening of August 18, 2015, a slip joint had to be fixed. When the line pressure reached 110 psi, there was a blow out that occurred under Wildflower Road. No one was injured, the operator crew scrambled to stop traffic, close the street, and secure the area. The morning of the 19<sup>th</sup>, the crew will place a mega-clamp on the line and restart the pump. The hope is that the current system's infrastructure will hold so that the pressure can reach 110-140 psi in order to fill the Morningstar tank. The operators will sample and disinfect the line per their normal operating procedures for fixing line breaks.

### Surface Water and Sediment Sampling

	8/18/2015	Total to Date
River Surface Water Samples	9	105
River Sediment Samples	9	82

### Irrigation Ditch Sampling

The irrigation ditch sampling effort has been completed.

	<b>Total to Date</b>
Non-River Sediment/Soil Samples	59

### Agriculture and Livestock Water

At this time, there are no additional requests for water or hay deliveries. The team spent August 18, 2015 retrieving tanks from farms.

	<b>8/18/15</b>	<b>Total to Date</b>
Farmers Served	0	28
Gallons to Farmers	0	1,068,270
Livestock Farms Served	0	31
Gallons to Livestock Farms	0	36,720
Hay/Alfalfa Pickup	0	244 bales

## **2.2 Finance Section**

### **Daily Cost Estimates Report**

<b>Funding Source</b>	<b>EPA Cumulative Expended Payroll</b>	<b>EPA Cumulative Expended Travel</b>	<b>EPA Cumulative Other Charges</b>	<b>Cumulative Contract Costs</b>	<b>TOTAL Cumulative Costs Expended</b>	<b>Estimated Daily Burn Rate</b>
<b>EPA</b>	<b>\$221,940.00</b>	<b>\$53,650.00</b>	<b>\$11,854.56</b>	<b>\$1,138,139.16</b>	<b>\$1,425,583.72</b>	<b>\$156,920</b>

## **3. Participating Entities in Region 6**

US EPA  
USFWS  
NMED  
ATSDR  
NM Department of Health  
NM Office of the State Engineer  
NM Department of Game and Fish  
County of San Juan – New Mexico

#### 4. Personnel

Group	Number
Region 6 EPA @ REOC	18
Region 6 Contractors @ REOC	7
Region 6 Staff in JIC – Durango, CO	1
Region 6 Staff in Area Command – Durango, CO	1
Region 6 DD – Farmington, NM	1
Region 6 Water Liaison – Santa Fe, NM	1
Region 6 EPA OSC	3
Region 6/7 Water Technicians	8
Region 6 Contractors in Field	25

U.S. ENVIRONMENTAL PROTECTION AGENCY  
 POLLUTION/SITUATION REPORT  
 San Juan River Response - Removal Polrep



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
 Region IX**

**Subject:** POLREP #7  
 San Juan River Response

Shiprock, NM  
 Latitude: 36.8704828 Longitude: -108.7892506

**To:** Robert Wise, EPA Region 9

**From:** Kathleen Dillon, Situation Unit Leader

**Date:** 8/19/2015

**Reporting Period:**

**1. Introduction**

**1.1 Background**

<b>Site Number:</b>	<b>Contract Number:</b>
<b>D.O. Number:</b>	<b>Action Memo Date:</b>
<b>Response Authority:</b>	<b>Response Type:</b>
<b>Response Lead:</b>	<b>Incident Category:</b>
<b>NPL Status:</b>	<b>Operable Unit:</b>
<b>Mobilization Date:</b>	<b>Start Date:</b>
<b>Demob Date:</b>	<b>Completion Date:</b>
<b>CERCLIS ID:</b>	<b>RCRIS ID:</b>
<b>ERNS No.:</b>	<b>State Notification:</b>
<b>FPN#:</b>	<b>Reimbursable Account #:</b>

**1.1.1 Incident Category**

**1.1.2 Site Description**

The Gold King Mine near Silverton, Colorado is a historic gold mine at approximately 11,300' elevation. The mine has a continuous discharge of acidic mine drainage that is a significant contributor of manganese, zinc, copper, and cadmium into the Cement Creek drainage of the Animas River watershed. The Gold King Mine has not had maintenance of the mine workings since 1991, and the workings have been inaccessible since 1995 when the mine portal collapsed.

EPA Region 9 is focused on a stretch of the San Juan River extending from Farmington, NM to Mexican

Hat, UT.

### **1.1.2.1 Location**

San Juan County, NM and Navajo Reservation. The Animas River flows into the San Juan River at Farmington, NM. After the Animas River meets the San Juan River, the San Juan River continues to flow west through parts of New Mexico, Colorado, and Utah.

### **1.1.2.2 Description of Threat**

Mine waste water was released into Cement Creek and the Animas River. The volume of the release based on US Geological Survey (USGS) Cement Creek gauging station is estimated at three million gallons. The initial environmental concern was the pulse of contaminated water containing sediment and metals discharged in Cement Creek which flows into the Animas River through Durango, Colorado, and into New Mexico where it joins the San Juan River before flowing into Utah. The river is also used for recreational purposes, including fishing and rafting, and is an important cultural resource for the Navajo Nation.

The leading edge of the release reached the New Mexico border on August 8, 2015 where it eventually discharged into the San Juan River.

### **1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results**

Aerial and ground reconnaissance indicates that the plume associated with the Gold King Mine release has dissipated downstream. There is no leading edge of contamination visible in downstream sections of the San Juan River or Lake Powell.

EPA Region 9 is collecting and assessing water quality from the San Juan River from La Plata Highway in New Mexico to Mexican Hat in Utah. Water sampling is occurring, and pH levels and dissolved concentrations of metals are being monitored.

## **1.2 Incident Objectives**

### **1. Safety**

- Provide safe working environment for all response personnel.
- Identify safety issues and monitor adherence to Health and Safety Plan
- Ensure personnel receive adequate rest and time off

### **2. Sampling**

- Daily water and sediment sampling from 11 designated locations along the San Juan River
- Sampling from Lake Powell
- synchronize sampling data and information with Area Command

### **3. Water Replacement**

- Work with Navajo representatives to staff water points and organize distribution

### **4. Public Outreach**

- Coordinate public forum at which Navajo tribal leaders and community members can address Incident Command representatives.

## **2. Current Activities**

### **2.1 Operations Section**

#### **2.1.1 Narrative**

Daily operations are focused around gathering water and sediment samples from 11 designated locations in the San Juan River. The Glen Canyon ICP is overseeing sampling in the vicinity of Lake Powell.

The Unified Command has also identified a need on the Navajo reservation to provide water and feed for livestock.

## **2.1.2 Response Actions to Date**

### **Sampling Branch**

EPA Region 9 initiated water and sediment sampling efforts on August 9, 2015, to assess the impacts of the release at the Gold King Mine on the San Juan River. Starting on August 9, samples were gathered from the shoreline of the following 11 designated locations along the San Juan River:

#### **New Mexico**

San Juan River at LaPlata Highway (SJLP)  
 PNM Intake (SJFP)  
 San Juan River at Hogback (SJHB)  
 San Juan River at Shiprock (SJSR)  
 San Juan DS from Shiprock (SJDS)  
 San Juan River at Four Corners (SJ4C)

#### **Utah**

San Juan River at McElmo Creek (SJME)  
 San Juan at Montezuma Creek (SJMC)  
 San Juan River at Bluff Bridge (SJBB)  
 San Juan River at Mexican Hat (SJMh)  
 McElmo Creek Tributary (MECT)

Sample totals are summarized below:

August 8 - 4 water samples (SJLP, SJFP, SJHB & SJSR)  
 August 9 - 13 water samples (all sites)  
 August 10 - 12 water samples, 11 sediment samples (all sites)  
 August 11 - 13 water samples, 13 sediment samples (all sites)  
 August 12 - 13 water samples, 13 sediment samples (all sites)  
 August 13 - 12 water samples, 12 sediment samples (all sites)  
 August 14 - 12 water samples, 12 sediment samples (all sites)  
 August 15 - 12 water samples, 12 sediment samples (all sites)  
 August 16 - 12 water samples, 12 sediment samples (all sites)  
 August 17 - 12 water samples, 12 sediment samples (all sites)  
 August 18 - 10 water samples, 10 sediment samples (did not sample at SJSR or SJDS)

There have been no requests for well samples and no requests for samples from diversion channels.

### **Community Relations Branch**

Region 9 continues daily meetings at designated Navajo Chapters. Chapter meetings are summarized below:

8/10 - Oljeto, Aneth  
 8/12 - Shiprock  
 8/14 - Oljeto, Aneth  
 8/15 - Hogback, Nenahnezad, San Juan, Upper Fruitland,  
 8/16 - Mexcian Water, Gaadiiahi  
 8/17 - No meetings conducted  
 8/18 - Beclabito

Scheduled chapter meetings are as follow:

8/20 - Monument Valley

8/21 - Navajo Mountain

Community Involvement Coordinators joined the ATSDR Health Educator at a Chapter meeting in Beclabito yesterday. This was EPA's first meeting in this location as a part of this emergency response. The meeting was attended by Beclabito Chapter officials, Council Delegate Amber Crotty, Dine College Professor Perry Charley, and around 30 community members. The main topics of questions/comments to EPA CICs were:

- Our current interpretation of data is very much inadequate to meet community needs
- Claims form (long term effects and red tape concerns)
- Effects to crops (losing crops and people won't buy existing crops)
- Continued discharge from Gold King Mine
- Long term plans to understand impact and remediate
- Shiprock water tanks and possible contamination

Perry Charley also provided comments about the adequacy of our sampling efforts and offered his assistance. The Grazing official would like us to return ASAP to provide an analysis of the data. More extensive notes are attached.

### **Water and Feed Delivery Branch**

A summary of water tank delivery for use for livestock and agriculture is as follows:

8/13 - 11,000 gallons of water delivered to Hal Chita, UT, 7,000 gallons of water delivered to Shiprock, NM

8/14 - 12 tanks (each 16,000 gallons) staged throughout Shiprock chapter

8/15 - 13 tanks (each 16,000 gallons) staged throughout various chapters of Navajo Nation.

8/16 - no change

8/17 - no change

8/18 - no change

Tanks are located at the following positions:

Upper Fruitland Rodeo Grounds

Shiprock Rodeo Grounds

Gadiiaah Chapterhouse

Teec Nos Pos Chapterhouse

Mexican Water

Mexican Hat

Montezuma

Windmill 9T-227

Windmill 9T-225 (Red Mesa)

Windmill 01T-509

Windmill 02A-93

Anneth Chapter House

Monument Valley Welcome Center

A summary of feed delivered for livestock is as follows:

8/14 - 384 bales delivered to Gaadiiahi chapter

Further water and feed requests will be fielded by the Window Rock EOC with delivery coordination managed through the Farmington ICP.

### **Drinking Water System Impacts**

No known water systems in Region 9 have been impacted.

### **Glen Canyon, Arizona ICP**

The Lake Powell Branch is working with the City of Page, Arizona, regarding the reduced need for periodic sampling of its drinking water intake in the foreseeable future and is coordinating with the ICP in Farmington to ensure that any subsequent sampling is consistent with that in other communities. Yesterday, one sample was collected from the Page, AZ drinking water intake along Lake Powell (Page-081715-11). This sample was shipped to TestAmerica Irvine for analysis.

The Lake Powell Branch has been refining plans for the upcoming USGS/NPS 14-day sampling expedition beginning at the end of this week.

The EPA will not be integrating its sampling efforts into the USGS/NPS Mercury study, instead EPA is focusing its sampling efforts on San Juan River Gold King Mine related water and sediment quality influences on Lake Powell. EPA is participating in this expedition because it is an excellent opportunity to gain access to multiple sampling locations not readily available without long-term planning, and it provides EPA with access to boats and sediment/depth sampling equipment not readily available in normal circumstances. The Lake Powell Branch is close to completing its estimates in support of a Resource Request to the ICP.

## **2.2 Planning Section**

### **2.2.1 Anticipated Activities**

Sediment and water sampling of the nine data points on the San Juan River will continue today. All samples will be gathered along the shoreline.

Farmington ICP members will not be conducting activities in the Shiprock Chapter until further notice. This includes samples being taken at the San Juan River at Shiprock (SJSR) and San Juan DS from Shiprock (SJDS), water and agricultural distribution needs and community outreach.

Sampling in the vicinity of Lake Powell will continue out of the Glen Canyon ICP. Sampling will recommence on Friday 21AUG15. The crew will embark on a 14 day float trip to collect a more robust sample set. The trip is in coordination with other agencies collecting data not related to this response.

A more robust water distribution system has been established throughout Navajo Nation. Water tanks are now staged at 13 total points throughout Navajo Nation with a capacity of 32,000 gallons of water at each location except for one location that has a capacity of 16,000 gallons.

Additional representatives from the EPA's community relations team have arrived at the Farmington ICP.

#### **2.2.1.1 Planned Response Activities**

Continued daily water and sediment sampling is planned.

Refilling water tanks staged throughout Navajo Nation will continue as needed via requests through the Window Rock EOC.

Community Outreach Branch at Farmington ICP will continue outreach with Navajo nation chapters.

#### **2.2.1.2 Next Steps**

### 2.2.2 Issues

On 17AUG15, at approximately 1130, seven members of the Farmington ICP response team were approached in the farmland area of Shiprock by a member of the Navajo Nation. The individual is in opposition to the response operations of Farmington ICP in regards to water and feed deliveries in the Shiprock Chapter. During the confrontation, the response personnel were threatened by being told their vehicles "would be stoned". They were also intimidated by a second vehicle that showed up in support of the individual. The response personnel listened to what the individual had to say and eventually left.

At approximately 1215, another incident occurred with the same individual at the bridge in Shiprock. There, the individual argued with 2 EPA employees and threatened to break their equipment. The individual left after a few minutes. In both cases the response personnel returned to the Farmington ICP and were unharmed.

An investigation is being conducted by the Navajo Department of Criminal Investigation.

Due to these events, for the safety of our response personnel, operations will be placed on hold in the Shiprock Chapter until the threats in this chapter are addressed.

## 2.3 Logistics Section

Requests from Navajo Nation for agriculture and livestock water and feed will be submitted to the Window Rock EOC via an ICS-213RR. Once signed, the request will be forwarded to the Farmington ICP where it will be processed.

## 2.4 Finance Section

### 2.4.1 Narrative

Yesterday, there was a burn rate of \$6,805.19 with a weekly burn rate of \$47,636.30 for the ERRS contract through EQM (Environmental Quality Management, Inc.). A total of \$250,600.00 is committed for upcoming operations.

START / Weston burn rate for 8/17 was \$40,122. Daily burn rate is estimated to continue to be around \$40,000. This figure includes all overhead, activities conducted in the field and lab analysis.

## 2.5 Other Command Staff

### 2.5.1 Safety Officer

With weather being forecasted into the 90s, hydration is of paramount importance. Additionally, much of the terrain surrounding the river is uneven and rocky. Responders should transit these areas with care.

While transiting throughout the region, responders should be mindful of the potential for contact with wildlife. Scorpions, snakes, and other similar animals raise a potential for injury.

### 2.5.2 Liaison Officer

Liaison officers are continuing outreach with Navajo community members and representatives of the Navajo Tribe.

### 2.5.3. Weather Forecast

Weather forecast for Wednesday, August 19

FARMINGTON AREA

*Today*

A mix of sun and clouds with a high of 88, low of 53 and 0% chance of precipitation. Wind coming out of the west at 20 miles per hour.

#### *Tonight*

No precipitation tonight. Partly cloudy, with a low around 53.

#### *Tomorrow*

Sunny with a high of 91, low of 58. No chance of precipitation.

### **3. Participating Entities**

#### **3.1 Area Command**

EPA Region 9 is coordinating with EPA Regions 6 and 8, Navajo Nation, and the states of Colorado, New Mexico, Utah, and Arizona. The EPA Region 9 is working with the Navajo Nation to evaluate possible impacts to the Tribe. Potentially impacted water systems have been notified, and precautions are in place to ensure drinking water is protected. The EPA and New Mexico Environmental Department are providing assistance to community water systems and closely monitoring the situation. EPA Region 9 has contacted the Bureau of Indian Affairs regarding potential impacts to the Navajo Nation and is currently working with Navajo liaisons.

#### **3.2 Unified Command and Cooperating Agencies**

The UC includes EPA Region 9 and United States Coast Guard. Bret Moxley has assumed the role of Incident Commander.

### **4. Personnel On Site**

EPA - 10  
EPA START - 13  
ERRS - 5  
USCG - 8  
Navajo Liaisons - 2

### **5. Definition of Terms**

No information available at this time.

### **6. Additional sources of information**

#### **6.1 Internet location of additional information/report**

[www.epa.gov/goldkingmine](http://www.epa.gov/goldkingmine)

### **7. Situational Reference Materials**

No information available at this time.